

## MIDEX 5/6 Downselect Q&A

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45. Would you please further specify what is included under the provisions for funding “develop subcontracting plans”, reference page 2 of Carlos Liceaga's charts from the Downselect Kickoff Meeting.

The summary on the charts presented at the Downselect Kickoff Meeting refers to instructions found in Section H, Subsection 2 (page 19) of the Phase A Guidelines.

According to NASA legal opinion, a distinction must be made between information that NASA is obtaining from a contractor solely for evaluation purposes and information that NASA is acquiring for the agency's direct benefit, to fulfill a program objective. Only the latter can take the form of a contract deliverable and paid for as a direct cost of contract performance. A contractor can be reimbursed for the former only as an indirect, so-called bid & proposal (B&P), cost.

The small business subcontracting plans are submitted solely for evaluation purposes. They have no value as a direct benefit to the NASA program. NASA cannot require such plans as contract deliverables. Thus, the cost of producing subcontracting plans should be allocated as an indirect B&P cost.

46. Please explain the draft Mission Definition and Requirements Agreement that is a required appendix.

The best explanation is an examination of the sample MDRA that can be found in the MIDEX Explorer Program Library. The MDRA is required as part of the Concept Study Report to enable the Phase B/C/D/E contract to be executed more quickly for the selected missions.

The MDRA contains science, project, and mission level requirements. These requirements are below the Level 1 requirements. It also contains a budget requirement, mission responsibilities for all major organizations in the project, and an

implementation summary. Technical evaluations of the project during design and implementation are based on the ability of the project to meet these requirements. They support the Level 1 science requirements. For Explorer missions, the Level 1 science requirements are drawn directly from the science objectives in the accepted proposal.

47. (Repeat of Question 11) Will NASA impose any QA requirements on parts, electronic components, boards, etc which are contributed from ESA and other European sources?

The Mission Assurance Requirements (MAR) document was part of the MIDEX AO and will become a requirement for all Phase B/C/D/E contracts between the Explorers Office and the selected PI team(s). The resulting MAR/MAG document contained in the AO represents the most concise set of minimum requirements we can provide that is consistent with our past and present experience with MIDEX missions.

Blank electronic boards for flight are required to have representative coupon Destructive Physical Analysis by a certified testing facility. EEE Parts that meet GSFC 311-INST-001 Grade 3 requirements are acceptable regardless of point of origin. Any candidate parts that fall short of these requirements would be subject to decision of a Parts Control Board consisting of the application designer, PI Systems Engineering rep, PI EEE Parts rep, and GSFC parts advisor. The PCB will determine whether any significant parts requirements gap exists and how to close it, on a case-by-case basis. Printed Wiring Boards (PWBs) to be assembled into higher levels of assembly need to be inspected for proper workmanship and subjected to environmental and qualification testing at appropriate levels of assembly. Workmanship requirements are described in the NASA SR&QA documents outlined in Rick Claffy's presentation titled "MIDEX Pre-Phase A Meetings; Safety, Reliability, and Quality Assurance Handout" dated April 2002 Teleconferences. The PI institution may be given some latitude in judging acceptability of minor discrepancies. Discrepancies having significant functional or reliability impacts must be discussed with the Explorers Program Office.

Since we view the MAR/MAG requirements/guidelines to be the minimum set of requirements based on our experience, and since we are still in an open competitive situation, it is not appropriate at this time to discuss selectively deleting or softening any of these requirements. PI teams should, however, be aware that we do anticipate that requirements compliance processes may differ among performing institutions. We are receptive to trade-offs based on best fits for the organizational cultures involved.

Existing agreements between NASA and ESA will be honored where corresponding compliance methods exist, provided that the difference of approach is the issue rather than the completeness of requirements compliance. For compliance items that are missing, some agreeable method of addressing the spirit of compliance, and of assessing resultant risks of less than full compliance, must be agreed upon.

48. (a) Is the Taurus 2110 a viable option (I'm assuming the cost profile is the same as the Taurus 2210)? (b) Is the Athena II also a viable option?

(a) There is no difference in cost or cost profile between the Taurus 2110 and 2210 configurations. (b) No, Athena II is not available under any existing NASA contracts; therefore, it is not considered viable for this AO. [Darrell Foster, KSC]

49A: The MIDEX Guidelines says, "If there are no substantive changes in the science implementation, then the scientific merit and the technical merit of the proposed investigation will not be reevaluated." We have in mind to update the data presented from current experiments in the science section. Will this cause reevaluation?

No.

In our proposal debriefing a major weakness was noted in the technical merit of the science implementation. We must address this weakness in the CSR. I presume it will be our response on this weakness will be evaluated. How will this be reevaluated? Will it trigger a general reevaluation of scientific and technical merit?

NASA HQ scientists will evaluate your proposal and the changes that you call out. A decision will then be made on whether to call in independent peer reviewers to advise us on the appropriateness and adequacy of your proposal.

In our proposal, we did not request funding for Phase F. If we were to decide to propose a Phase F now, would this trigger a reevaluation?

Same response: NASA HQ scientists will make a judgment call.

49B: N/A

49C: Section L is to address "Justification and Cost Plan for any Phase F Activities". If we do not plan any Phase F activities, do we omit this section?

Yes.

49D: I foresee needing to include some letters from our foreign partners. May we include such letters? May we place them in the "Letters of Endorsement" appendix?

Letters from foreign partners are required. Placing them in the "Letters of Endorsement" appendix would be fine.

49E: Since we are not responsible for payload operations in space, may we omit the appendix on Orbital Debris Analysis?

No. See question MO-1 from the MIDEX AO Q&A:

NASA cannot require non-US agencies to meet its requirements. However NASA does expect non-US agencies to meet their own requirements. You should tell us what, if any, requirements the sponsoring agency places on orbital debris for its own missions.

You should respond to the orbital debris appendix as required. However a possible response to “whether you anticipate that spacecraft disposal will be required” is that it is not required because NPD 8710.3 does not apply to non-US spacecraft.

NASA is interested in public safety. NASA is interested in whether a mission poses a risk to health and safety even if it does not violate any regulations or requirements.

49F: Additional pages are allowed in the Science Investigation section. Can we simply identify the additional material as "added since the original proposal" to indicate that it is a change (i.e. an addition) to the Science Investigation section without bolding all of it as required for changes to the Science Investigation section?

Yes.

49G: N/A

49H: N/A

49I: N/A

49J: N/A

49K: N/A

49L: N/A

49M: N/A

49N: N/A

49O: Appendix 10 concerns draft international agreements. If we are to provide draft agreements with all our international partners, could you point me to an example of the sort of agreement you have in mind?

You should provide draft international agreements for all agreements that NASA will be required to enter into. You may exclude agreements that do not involve NASA. There is a draft international agreement in the MIDEX Explorer Program Library.

50: Is there a budget profile (guideline or otherwise) for MIDEX? I've searched both the AO and the CSR G/L and I can't find any reference to this.

In Explorer we do not specify a funding profile -- you should propose the optimal profile for your mission. If your mission is selected and NASA cannot accommodate your proposed funding profile, then the Explorer Program Office will negotiate a mutually acceptable profile with the project as part of the Phase B/C/D/E contract negotiations.

51. In the answer to question 42 it is said, "Once the data is considered to be public data, and is released to a university, it is not subject to these requirements and can be freely posted on a website." Data may be proprietary to the proposing team for a short period of validation and verification. Data from international missions may have a longer proprietary period when data analysis begins but the data is not yet public. For the purpose of IT security, when is the data considered to be public data?

For the purpose of IT security, science data can be treated as public data once it is ready to be distributed to Co-I's even if it is still proprietary.

52. (a) Section II.J.2 is called Mission Operations and Data Analysis (Phase E) Cost Estimate and Section II.J.4 is called Total Mission Cost (TMC) Estimate. There is no Section II.J.3. Is something important missing, or is this just a typo?

This is just a typo.

(b) Section II.J.2.e (Elements of Cost Breakdown) refers to "the elements of the cost described under section K.1.e above." There is no section K.1.e (and it would be "below" if there were one). Should this really be a reference to section J.1.e (Elements of Cost Breakdown)?

This should be a reference to J.1.e.

53. Are there any constraints on the duration of Phase B, or C/D (so long as the launch date constraints are met), such as in Discovery where C/D is limited to 36 months?

Explorer does not set constraints on mission phases, except for the no-later-than launch date.

54. The Concept Study Guidelines state that the type font must not be smaller than 10-point in figures and tables. Does this refer to titles and entries in tables and captions of figures? Is it allowable to use 8-point font in graphics?

The font requirement for the Concept Study Report is unchanged from the font requirement in the AO. The minimum font size is 10 point everywhere except for the body of the report, which must be at least 12 point.

55. Since submitting the proposal, there have been some relevant experimental and theoretical developments that tend to strengthen the scientific rationale for our

mission. Assuming the science section is not going to be re-reviewed, I am not planning to describe these. Should I include them?

I can't be definitive. If you have made no changes in your implementation plans that trigger the need for a science review, then you would not need to include these updates. If you do trigger a re-review of science through changes in science implementation, then these developments might be useful. In either case, you are welcome to incorporate these changes into your presentations at the site visit and at HQ to Weiler *et al.*

56. The requirement for CSR submission is that each hard copy is to be accompanied by a CDROM. What is to be included in the CDROM version of the CSR? The 132 pages only, or in addition the cost plan, appendices, Phase F activities etc i.e., the entire body of the 3-ring binder?

The CD-ROM should contain everything that is in your Concept Study Report, including the cost plan, the second launch section, the Phase f section, and all appendices. Yes, the entire binder.

57. One of my co-investigators can no longer participate in the mission. Can I drop him/her from the co-investigator list that was proposed in the Stage 1 proposal?

You may modify your co-investigator list when it is justifiable. This qualifies.

58. When the questions are FAXed to us on, can we also get an electronic version of the questions E-mailed to us?

Yes. See site visit guideline #1 at <http://spacescience.nasa.gov/codesr/midex/notes/draftsitevisit.html>.

59. Figure 1 (Total mission cost funding profile template) does not fit in one page at 10pt font with all the co-Is included. Is there an exception to the 10pt font rule, or to the single page requirement for Figure1?

I assume that this problem arises because you have so many Co-I's. You may rack up all of the science only, non hardware Co-Is into a single line on Figure 1, and provide a breakdown of those Co-I's in a follow-on figure.